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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,413	03/26/2004	Michael D. Kass	S-99,227	3188

31974 7590 12/14/2005

UNITED STATES DEPARTMENT OF ENERGY  
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WASHINGTON, DC 20585-0162

EXAMINER

BLACKWELL RUDASIL, GWENDOLYN A

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/817,413

Applicant(s)

KASS ET AL

Examiner

Gwendolyn Blackwell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) 62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-62, drawn to a self cleaning window assembly, classified in class 428, subclass 432.
  - II. Claim 63, drawn to a method to monitor emission components, classified in class 340, subclass 3.1.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions Group II and Group I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process can be used to make a materially different product. The product requires a self-cleaning window having at least two layers to provide the self cleaning properties. The process claims do not require the same limitations.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Esther Roberts on November 1, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-62. Affirmation of this election must be made by applicant in replying to this Office action. Claim 63 is

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withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

*The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.*

7. Claims 1-5, 9-18, 22-31, 35-50, 52-54, 56-58, and 60-62 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-5, 9-18, 22-31, 35-50, 52-54, 56-58, and 60-62 require that the transparent base layer has an inner and an outer surface wherein said inner surface is exposed to said combustion environment containing said contaminant. In addition there is another layer formed on the transparent base layer that interacts with the combustion environment. If the inner surface is exposed to the combustion environment, than how can another layer be placed between the inner surface of the transparent base layer and the combustion environment.

***Examiner's Comment***

8. The use of the transitional phrase "composed" will be taken to be synonymous with "consisting essentially of". *MPEP 2111.03*.

9. As there is no discussion in the specification as to nature of the composition of the heat transfer materials, the same materials that make up the catalytic materials will be taken to also cover heat transfer materials as there are some claims which use "catalytic/heat transfer."

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

*(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

11. Claims 1-4, 6-12, 14-17, 19-25, 27-30, 32-38, 40-42, 44-46, 48-53, 55-57, and 59-61 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent no. 6,054,227, Greenberg et al.

***Regarding claims 1-4***

Greenberg et al disclose a self-cleaning coating that can be applied to the surfaces of an oven, including the interior surfaces such as the oven transparency (window), (column 3, lines 30-58). When the substrate is glass, a barrier layer (transparent base layer) is placed between the substrate and the catalytic layer, (column 4, lines 33-40).

The phrase "for enabling optical access to a combustion" is considered a statement of intended use. The intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed

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invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Because the catalytic coated oven transparency of Greenberg et al is not structurally different from Applicant's claimed self-cleaning window assembly, the window assembly as claimed does not provide a patentable distinction over the prior art of record, meeting the limitations of claim 1 and 2.

The barrier layer is comprised of metal oxides such as tin oxides, silicon oxides, titanium oxides, zirconium oxides, and aluminum oxides, (column 5, lines 16-21), meeting the limitations of claim 2. Tin oxide can also be used for the transparent base layer which is also known to be conductive, meeting the limitations of claim 3. Silver oxide (precious metal based catalyst) can be used as the catalytic material, (column 4, lines 57-65), meeting the limitations of claim 4.

*Regarding claims 6-8*

When the substrate is glass, a barrier layer (transparent base layer) is placed between the substrate and the catalytic layer, (column 4, lines 33-40). According to the specification, one of the means for heating is conductive materials, (specification, page 19, line 21). Figure 3, demonstrates that the barrier layers is in contact with the conductive material of the oven frame which is comprised of metal, (column 4, lines 33-40).

The phrase "for enabling optical access to a combustion" is considered a statement of intended use. The intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Because the catalytic coated oven transparency of Greenberg et

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al is not structurally different from Applicant's claimed self-cleaning window assembly, the window assembly as claimed does not provide a patentable distinction over the prior art of record, meeting the limitations of claim 6.

The barrier layer is comprised of aluminum oxides which are known to be electrically conductive, (column 5, lines 17-21), meeting the limitations of claims 7-8.

*Regarding claims 9-12*

When the substrate is glass, a barrier layer (transparent base layer) is placed between the substrate and the catalytic layer, (column 4, lines 33-40). According to the specification, one of the means for heating is conductive materials, (specification, page 19, line 21). Figure 3, demonstrates that the barrier layers is in contact with the conductive material of the oven frame which is comprised of metal, (column 4, lines 33-40).

The phrase "for enabling optical access to a combustion" is considered a statement of intended use. The intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Because the catalytic coated oven transparency of Greenberg et al is not structurally different from Applicant's claimed self-cleaning window assembly, the window assembly as claimed does not provide a patentable distinction over the prior art of record, meeting the limitations of claim 9.

The barrier layer is comprised of tin oxides which are known to be electrically conductive, (column 5, lines 17-21), meeting the limitations of claims 10-11. Silver oxide

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(precious metal based catalyst) can be used as the catalytic material, (column 4, lines 57-65), meeting the limitations of claim 12.

*Regarding claims 14-17*

When the substrate is glass, a barrier layer (transparent base layer) is placed between the substrate and the catalytic layer, (column 4, lines 33-40). The barrier layer can be comprised of a mixture of tin oxides and zirconium oxides which function not only as the base layer but also an oxygen conducting layer with electrically conductivity, (column 5, lines 16-21).

The phrase “for enabling optical access to a combustion” is considered a statement of intended use. The intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Because the catalytic coated oven transparency of Greenberg et al is not structurally different from Applicant’s claimed self-cleaning window assembly, the window assembly as claimed does not provide a patentable distinction over the prior art of record, meeting the limitations of claims 14-16.

Silver oxide (precious metal based catalyst) can be used as the catalytic material, (column 4, lines 57-65), meeting the limitations of claim 17.

*Regarding claims 19-21*

When the substrate is glass, a barrier layer (transparent base layer) is placed between the substrate and the catalytic layer, (column 4, lines 33-40). According to the specification, one of the means for heating is conductive materials, (specification, page 19, line 21). Figure 3, demonstrates that the barrier layers is in contact with the conductive material of the oven frame



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which is comprised of metal, (column 4, lines 33-40). The barrier layer can be comprised of a mixture of tin oxides and zirconium oxides which function not only as the base layer but also an oxygen conducting layer with electrically conductivity, (column 5, lines 16-21).

The phrase “for enabling optical access to a combustion” is considered a statement of intended use. The intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Because the catalytic coated oven transparency of Greenberg et al is not structurally different from Applicant’s claimed self-cleaning window assembly, the window assembly as claimed does not provide a patentable distinction over the prior art of record, meeting the limitations of claims 19-21.

*Regarding claims 22-25*

When the substrate is glass, a barrier layer (transparent base layer) is placed between the substrate and the catalytic layer, (column 4, lines 33-40). According to the specification, one of the means for heating is conductive materials, (specification, page 19, line 21). Figure 3, demonstrates that the barrier layers is in contact with the conductive material of the oven frame which is comprised of metal, (column 4, lines 33-40). The barrier layer can be comprised of a mixture of tin oxides and zirconium oxides which function not only as the base layer but also an oxygen conducting layer with electrically conductivity, (column 5, lines 16-21).

The phrase “for enabling optical access to a combustion” is considered a statement of intended use. The intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed

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invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Because the catalytic coated oven transparency of Greenberg et al is not structurally different from Applicant's claimed self-cleaning window assembly, the window assembly as claimed does not provide a patentable distinction over the prior art of record, meeting the limitations of claims 22-24.

Silver oxide (precious metal based catalyst) can be used as the catalytic material, (column 4, lines 57-65), meeting the limitations of claim 25.

*Regarding claims 27-30*

When the substrate is glass, a barrier layer (transparent base layer) is placed between the substrate and the catalytic layer, (column 4, lines 33-40). The barrier layer can be comprised of a mixture of tin oxides and zirconium oxides which function not only as the base layer but also an oxygen conducting layer with electrically conductivity, (column 5, lines 16-21).

The phrase "for enabling optical access to a combustion" is considered a statement of intended use. The intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Because the catalytic coated oven transparency of Greenberg et al is not structurally different from Applicant's claimed self-cleaning window assembly, the window assembly as claimed does not provide a patentable distinction over the prior art of record, meeting the limitations of claims 27-29.

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Silver oxide (precious metal based catalyst) can be used as the catalytic material, (column 4, lines 57-65), meeting the limitations of claim 30.

*Regarding claims 32-38 and 40-42*

When the substrate is glass, a barrier layer (transparent base layer) is placed between the substrate and the catalytic layer, (column 4, lines 33-40). According to the specification, one of the means for heating is conductive materials, (specification, page 19, line 21). Figure 3, demonstrates that the barrier layers is in contact with the conductive material of the oven frame which is comprised of metal, (column 4, lines 33-40). The barrier layer can be comprised of a mixture of tin oxides and zirconium oxides which function not only as the base layer but also an oxygen conducting layer with electrically conductivity, (column 5, lines 16-21).

The phrase “for enabling optical access to a combustion” is considered a statement of intended use. The intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Because the catalytic coated oven transparency of Greenberg et al is not structurally different from Applicant’s claimed self-cleaning window assembly, the window assembly as claimed does not provide a patentable distinction over the prior art of record, meeting the limitations of claims 32-37 and 40-42.

Silver oxide (precious metal based catalyst) can be used as the catalytic material, (column 4, lines 57-65), meeting the limitations of claim 38.

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*Regarding claims 44-46 and 48-50*

When the substrate is glass, a barrier layer (transparent base layer) is placed between the substrate and the catalytic layer, (column 4, lines 33-40). The barrier layer can be comprised of a mixture of tin oxides and zirconium oxides which function not only as the base layer but also an oxygen conducting layer with electrically conductivity, (column 5, lines 16-21).

The phrase “for enabling optical access to a combustion” is considered a statement of intended use. The intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Because the catalytic coated oven transparency of Greenberg et al is not structurally different from Applicant’s claimed self-cleaning window assembly, the window assembly as claimed does not provide a patentable distinction over the prior art of record, meeting the limitations of claims 44-46 and 48-50.

*Regarding claims 51-53*

When the substrate is glass, a barrier layer (transparent base layer) is placed between the substrate and the catalytic layer, (column 4, lines 33-40). The barrier layer can be comprised of zirconium oxides (heat transfer material), (column 5, lines 16-21).

The phrase “for enabling optical access to a combustion” is considered a statement of intended use. The intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136

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USPQ 458, 459 (CCPA 1963). Because the catalytic coated oven transparency of Greenberg et al is not structurally different from Applicant's claimed self-cleaning window assembly, the window assembly as claimed does not provide a patentable distinction over the prior art of record, meeting the limitations of claims, meeting the limitations of claims 51-52.

Silver oxide (precious metal based catalyst) can be used as the catalytic material, (column 4, lines 57-65), meeting the limitations of claim 53.

*Regarding claims 55-57 and 59-61*

When the substrate is glass, a barrier layer (transparent base layer) is placed between the substrate and the catalytic layer, (column 4, lines 33-40). The barrier layer can be comprised of a zirconium oxides, (column 5, lines 16-21). Silver oxide being taken as the oxygen conducting layer as well as the catalytic layer, (column 4, lines 57-65).

The phrase "for enabling optical access to a combustion" is considered a statement of intended use. The intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Because the catalytic coated oven transparency of Greenberg et al is not structurally different from Applicant's claimed self-cleaning window assembly, the window assembly as claimed does not provide a patentable distinction over the prior art of record, meeting the limitations of claims 55-57 and 59-61.

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*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gwendolyn Blackwell whose telephone number is (571) 272-1533. The examiner can normally be reached on Monday - Thursday; 5:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gwendolyn Blackwell  
Examiner  
Art Unit 1775



DEBORAH JONES  
SUPERVISORY PATENT EXAMINER